

# OSHA Requirements

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The requirements of this section apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees. The [selection and distribution](#) section does not apply to extinguishers provided for employee use on the outside of workplace buildings or structures.

Where extinguishers are provided but are not intended for employee use and the employer has an [emergency action plan](#) and a fire prevention plan that meet the requirements of [29 CFR 1910.38](#), then only the requirements of the [inspection, maintenance and testing](#) and [hydrostatic testing](#) sections apply [[29 CFR 1910.157\(a\)](#)]. To comply with OSHA requirements, consider the following:



- [General requirements](#)
- [Exemptions](#)
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- [Hydrostatic testing](#)
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## General requirements

An employer must:

- Provide portable fire extinguishers and mount, locate, and identify them so that they are readily accessible to employees without subjecting the employees to possible injury [[29 CFR 1910.157\(c\)\(1\)](#)].
- Use only approved portable fire extinguishers [[29 CFR 1910.157\(c\)\(2\)](#)].
- Do not use portable fire extinguishers that use carbon tetrachloride or chlorobromomethane extinguishing agents [[29 CFR 1910.157\(c\)\(3\)](#)].

- Assure that portable fire extinguishers are maintained, fully charged, operating properly, and kept in designated places at all times except during use [[29 CFR 1910.157\(c\)\(4\)](#)].
- Remove from service all soldered or riveted shell self-generating soda acid or self-generating foam or gas cartridge water type portable fire extinguishers that are operated by inverting the extinguisher to rupture the cartridge or to initiate an uncontrollable pressure generating chemical reaction to expel the agent [[29 CFR 1910.157\(c\)\(5\)](#)].

### Exemptions

The following exemptions apply:

- Where the employer has established and implemented a written fire safety policy which requires the immediate and total evacuation of employees from the workplace upon the sounding of a fire alarm signal and which includes an [emergency action plan](#) and a fire prevention plan that meet the requirements of [29 CFR 1910.38](#) and [29 CFR 1910.39](#) respectively, and when extinguishers are not available in the workplace, the employer is exempt from all requirements of this section unless a specific standard in Part 1910 requires that a portable fire extinguisher be provided [[29 CFR 1910.157\(b\)\(1\)](#)].
- Where the employer has an [emergency action plan](#) meeting the requirements of [29 CFR 1910.38](#), which designates certain employees to be the only employees authorized to use the available portable fire extinguishers, and which requires all other employees in the fire area to immediately evacuate the affected work area upon the sounding of the fire alarm, the employer is exempt from the distribution requirements in the [selection and distribution](#) section [[29 CFR 1910.157\(b\)\(2\)](#)].

### Selection and distribution

An employer must:

- Provide portable fire extinguishers for employee use. Select and distribute the extinguishers based on the types of anticipated workplace fires and on the size and degree of hazard that would affect their use [[29 CFR 1910.157\(d\)\(1\)](#)].
- Distribute portable extinguishers for use on Class A fires so that the travel distance for employees to any extinguisher is 75 feet (22.9 meters) or less [[29 CFR 1910.157\(d\)\(2\)](#)].
- Use uniformly spaced standpipe systems or hose stations connected to a sprinkler system installed for emergency use by employees, instead of Class A portable fire extinguishers, provided that such systems meet the respective requirements of [29 CFR 1910.158](#) or [29 CFR 1910.159](#), that they provide total coverage of the area to be protected, and that employees are trained at least annually in their use [[29 CFR 1910.157\(d\)\(3\)](#)].
- Distribute portable fire extinguishers for use on Class B fires so that the travel distance for employees to any extinguisher is 50 feet (15.2 meters) or less [[29 CFR 1910.157\(d\)\(4\)](#)].
- Distribute portable fire extinguishers for use on Class C hazards on the appropriate pattern for the existing Class A or Class B hazards [[29 CFR 1910.157\(d\)\(5\)](#)].
- Distribute portable fire extinguishers or other containers of Class D extinguishing agent for employee use so that the travel distance from the combustible metal working area to any

extinguisher is 75 feet (22.9 meters) or less. Portable fire extinguishers for Class D hazards are required in areas where combustible metal powders, flakes, shavings, or similarly sized products are generated at least once every two weeks [[29 CFR 1910.157\(d\)\(6\)](#)].

### Inspection, maintenance, and testing

An employer must:

- Inspect, maintain, and test all portable fire extinguishers in the workplace [[29 CFR 1910.157\(e\)\(1\)](#)].
- Visually inspect portable extinguishers or hoses monthly [[29 CFR 1910.157\(e\)\(2\)](#)].
- Perform an annual maintenance check on portable fire extinguishers. Stored pressure extinguishers do not require an internal examination. Record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. Make the record available to the Assistant Secretary upon request [[29 CFR 1910.157\(e\)\(3\)](#)].
- Empty and maintain dry chemical extinguishers (that require a 12-year hydrostatic test) every six years. Dry chemical extinguishers that have non-refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the six-year requirement begins from that date [[29 CFR 1910.157\(e\)\(4\)](#)].
- Provide alternate equivalent protection when portable fire extinguishers are removed from service for maintenance and recharging [[29 CFR 1910.157\(e\)\(5\)](#)].

### Hydrostatic testing

An employer must:

- Assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities [[29 CFR 1910.157\(f\)\(1\)](#)].
- Assure that portable extinguishers are hydrostatically tested at the intervals listed in [Table L-1](#) of this section, except under any of the following conditions: [[29 CFR 1910.157\(f\)\(2\)](#)]
  - When the unit has been repaired by soldering, welding, brazing, or use of patching compounds [[29 CFR 1910.157\(f\)\(2\)\(i\)](#)];
  - When the cylinder or shell threads are damaged [[29 CFR 1910.157\(f\)\(2\)\(ii\)](#)];
  - When there is corrosion that has caused pitting, including corrosion under removable name plate assemblies [[29 CFR 1910.157\(f\)\(2\)\(iii\)](#)];
  - When the extinguisher has been burned in a fire; or [[29 CFR 1910.157\(f\)\(2\)\(iv\)](#)]
  - When a calcium chloride extinguishing agent has been used in a stainless steel shell [[29 CFR 1910.157\(f\)\(2\)\(v\)](#)].
- Assure that an internal examination of cylinders and shells to be tested is made before the

hydrostatic tests in addition to an external visual examination [[29 CFR 1910.157\(f\)\(3\)](#)].

Table L-1	
Type of extinguishers	Test interval (years)
Soda acid (soldered brass shells) (until 1/1/82)	*
*Soda acid (stainless steel shell)	5
*Cartridge operated water and/or antifreeze	5
Stored pressure water and/or antifreeze	5
Wetting agent	5
Foam (soldered brass shells) (until 1/1/82)	*
Foam (stainless steel shell)	5
Aqueous Film Forming foam (AFFF)	5
Loaded stream	5
Dry chemical with stainless steel	5
Carbon Dioxide	5
Dry chemical, stored pressure, with mild steel, brazed brass or aluminum shells	12
Dry chemical, cartridge or cylinder operated, with mild steel shells	12
Halon 1211	12
Halon 1301	12
Dry powder, cartridge or cylinder operated with mild steel shells	12
<p><b>Footnote: Extinguishers having shells constructed of copper or brass joined by soft solder or rivets shall not be hydrostatically tested and shall be removed from service by January 1, 1982. (Not permitted)</b></p> <p><b>*Although still included in Table L-1, <a href="#">29 CFR 1910.157</a>, Soda acid (stainless steel shell) and Cartridge operated water and/or antifreeze extinguishers are now obsolete.</b></p>	

- Assure that portable fire extinguishers are hydrostatically tested whenever they show new evidence of corrosion or mechanical injury, except under the conditions listed in paragraphs (f)(2)(i)-(v) of this section [[29 CFR 1910.157\(f\)\(4\)](#)].
- Assure that hydrostatic tests are performed on extinguisher hose assemblies that are equipped with a shut-off nozzle at the discharge end of the hose. The test interval must be the same as specified for the extinguisher [[29 CFR 1910.157\(f\)\(5\)](#)].
- Hydrostatically test carbon dioxide hose assemblies with a shut-off nozzle at 1,250 psi (8,620 kPa) [[29 CFR 1910.157\(f\)\(6\)](#)].
- Hydrostatically test dry chemical and dry powder hose assemblies with a shut-off nozzle at 300 psi (2,070 kPa) [[29 CFR 1910.157\(f\)\(7\)](#)]. Hose assemblies passing a hydrostatic test do not require any type of recording or stamping [[29 CFR 1910.157\(f\)\(8\)](#)].
- Test hose assemblies for carbon dioxide extinguishers within a protective cage device [[29 CFR 1910.157\(f\)\(9\)](#)].

- Test carbon dioxide extinguishers and nitrogen or carbon dioxide cylinders used with wheeled extinguishers every five years at 5/3 of the service pressure as stamped into the cylinder. Nitrogen cylinders that comply with 49 CFR 173.34(e)(15) may be hydrostatically tested every 10 years [[29 CFR 1910.157\(f\)\(10\)](#)].
- Hydrostatically test stored pressure and Halon 1211 types of extinguishers at the factory test pressure, not to exceed two times the service pressure [[29 CFR 1910.157\(f\)\(11\)](#)].
- Test self-generating type soda acid and foam extinguishers at 350 psi (2,410 kPa) [[29 CFR 1910.157\(f\)\(12\)](#)].
- Do not use air or gas pressure for hydrostatic testing [[29 CFR 1910.157\(f\)\(13\)](#)].
- Remove from service extinguisher shells, cylinders, or cartridges that fail a hydrostatic pressure test, or that are not fit for testing [[29 CFR 1910.157\(f\)\(14\)](#)].
- Ensure that the equipment for testing compressed gas type cylinders be of the water jacket type. The equipment must have an expansion indicator that operates with an accuracy within 1 percent of the total expansion or .1cc (.1mL) of liquid [[29 CFR 1910.157\(f\)\(15\)\(i\)](#)].
- Ensure that the equipment for testing non-compressed gas type cylinders includes the following: [[29 CFR 1910.157\(f\)\(15\)\(ii\)](#)]
  - A hydrostatic test pump, hand or power operated, capable of producing at least 150 percent of the test pressure, which must include appropriate check valves and fittings [[29 CFR 1910.157\(f\)\(15\)\(ii\)\(A\)](#)];
  - A flexible connection for attachment to fittings to test through the extinguisher nozzle, test bonnet, or hose outlet, as is applicable; and [[29 CFR 1910.157\(f\)\(15\)\(ii\)\(B\)](#)]
  - A protective cage or barrier for personal protection of the tester, designed to provide visual observation of the extinguisher under test [[29 CFR 1910.157\(f\)\(15\)\(ii\)\(C\)](#)].
- Maintain and provide upon request to the Assistant Secretary evidence that the required hydrostatic testing of fire extinguishers has been performed at the time intervals shown in [Table L-1](#). Such evidence must be in the form of a certification record that includes:
  - The date of the test;
  - The signature of the person who performed the test; and
  - The serial number, or other identifier, of the fire extinguisher that was tested.

Such records must be kept until the extinguisher is hydrostatically retested at the time interval specified in [Table L-1](#) or until the extinguisher is taken out of service, whichever comes first [[29 CFR 1910.157\(f\)\(16\)](#)].

### Training and education

An employer must:

- Provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting [[29 CFR 1910.157\(g\)\(1\)](#)]. Provide this education when employees are first hired and once a year thereafter [[29 CFR 1910.157\(g\)\(2\)](#)].

- Train employees (who have been designated to use fire fighting equipment in the emergency action plan) in the use of the equipment [[29 CFR 1910.157\(g\)\(3\)](#)]. Provide this training when employees are first given this assignment and once a year thereafter [[29 CFR 1910.157\(g\)\(4\)](#)].